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December 13, 2000

Assistant Commissioner for Patents
United States Patent and Trademark Office
Washington, D. C. 20231
Attn: Group Art Unit 2768

#2
S. Catlin
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re: Application No. 09/489,739 ✓
Title: Invention in Finance
Sole Applicant and Inventor: David Andrew D'Zmura (independent inventor)
Examiner: Mr. Frantzy Poinvil

Election with Traverse

Dear Mr. Poinvil:

Following on my phone message to you, I am electing with traverse, and attach hereto my argument for traverse. I elect the Group I invention. Please enter this election with traverse at this time, and cancel the remaining claims as may become applicable subject to consideration of my traverse.

Sincerely,

David Andrew D'Zmura

enc. Argument for Traverse



P. O. Box 872
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December 11, 2000

Assistant Commissioner for Patents
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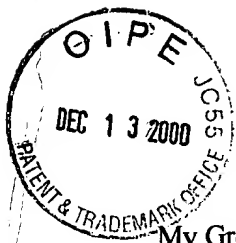
re: Application No. 09/489,739
Title: Invention in Finance
Sole Applicant and Inventor: David Andrew D'Zmura (independent inventor)
Examiner: Mr. Frantzy Poinvil

Argument for Traverse of Restriction Requirement

Dear Mr. Poinvil:

In reply to the Office Action of 11/06/00, containing your Detailed Action and requesting my Reply, I hereby submit traverse argument that Restriction to one of my inventions is not required. First, your groupings of my unique inventions, based on claims which are independent in nature, are in fact facilitated by, and useful within, the scope of each, basing multiple dependent claims and inventions. Such are the inventions of Figures 1 and 2, based upon the inventions cited by you as Group I and II, respectively, providing the data and numerical and manufacturing process basis for the two-channel automated arbitrage engine of Figure 3. Figure 4 comprises integrated systems architecture of a triple-server, real-time, processing system, wherein each business logic server houses, processes and renders substance, content and application, derived from or comprising the inventions of Group I and II, plus the invented engines of Figures 1, 2 and 3, on inventions of Figures 1-4, I have yet to file full claims.

Also, further unique, related, inventions are contained in my Section I: my "standard method", "market yield" process and algorithms, with example spreadsheet and arbitrage differential detailing, using identical securities, processing and "S" and "a" formulas pages 2-26, Figures 1, 3, 4 and page 27, distinct from Group I (my "governing yield", "Yield M"), and used to provide the values against which my governing yield has relative value/arbitrage basis and usage in automated arbitrage engine systems; and my portfolio method, page 28, utilizing Group I aggregation, valuation, sensitivity and arbitrage methods. In constructing a ladder portfolio of same-class securities, I am deploying de facto replicants and asset resource pools from which replicants can be calculated, analysed for values and arbitrage, constructed, manufactured and executed as part of the risk-free portfolio's earnings enhancements.



Similarly, the inventions of Group III and IV have been cited by you on the basis of my claims. My Group III and IV inventions, contained in my application's Section II, pages 29 to 66, are mutually augmenting inventions, and are complementary components of an effective risk management and measurement of bank default risk and estimation of insured loss likelihoods and valuations. Group III inventions comprise the establishment of criterion data values, these combined in ratios, establishing values for operating ratios, with graphical and numerical output for analysis and display. These ratios and values are directly useful for estimating default martingales and recovery-type values, both of which factor as variables of my modified martingale conditional probability lattice, this cited by you as Group IV. In addition to description of Group III and IV inventions, with drawings Figures 5 and 6, my application's Section II also contains specification of the method, process and output, in description and drawings, of my small sample technology, pages 56 to 66, which I utilized to evaluate the small sample data environment of my state, theta, variables, comprising deposit default and catastrophic loss, underlying pages 29 to 55, Section II. I mention using my small-sample technology on page 50, top.

The many formulae, algorithms, numerical processes and data values contained in Section II are presented linked together in business and computational logic structures, (including those not yet included in my application's claims, of pages 43 to 55), in my written and scripted computational code. My inventions of Section II also include a reciprocal netting structure between the bank and insurance industries, of deposit guarantees and cat loss instruments, as tradable securities and swap transactions.

The inventions of Section I, including Group I and II, and of Section II, including Group III and IV, interrelate with each other in fundamental, inextricable, manners, though each be independent. For example, the analytic valuation technologies of Section I, Group I, are applicable to the securities and investment instruments of Section II, through my central functions, beginning Formula 1.1, page 9. Also for example, but in reverse manner, Group III and Group IV inventions are useful to evaluate and provide discount measure on the present value and the implied price of Group I and Group II invention.

It was logical I incorporated in this application its device, my financial engineering calculator, Section III, comprised, in hardware and software, to afford my invention's computational processes, while also enabling advanced academic and financial industry criteria and methods in text and code, pages 67 to 75. For example, the Section III Appendix B cites my coded equations and references which include, comprise or derive from, my formulae, functions and processes of Sections I and II.

Sincerely,

David Andrew D'Zmura

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